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## **Egg Size in the Musk Turtle, *Sternotherus odoratus* Latreille**

**Richard A. Edgren\***

Data on egg size of the musk turtle, *Sternotherus odoratus* Latreille, have been published by a number of workers (Carr, 1952 ; Edgren, 1949; Risley, 1933) . Cagle (1953) has recently thrown doubt upon the validity of certain of these data, and for that matter on all mensural information on reptile eggs not accompanied by statements relative to age and incubation condition of the eggs. Recently it was pointed out (Edgren, 1955) that the eggs of the hog-nosed snake, *Heterodon nasicus*, appear to change in width and weight, but not in length during incubation, obviating at least a part of Cagle's criticisms. The present note concerns the lack of change in measurements of incubating musk turtle eggs.

During the past summer musk turtles have been collected from Rockland Lake, Racine County, Wisconsin. These turtles were sacrificed under chloroform anaesthesia and autopsied. Three females taken 9 June, 1955 contained oviductual eggs. Turtle no. 9 had two eggs in the right and one in the left oviduct ; no. 10 also contained three eggs distributed as in no. 9; no. 12 had two eggs in each oviduct. As the eggs appeared to be ready for laying they were saved and measured 10 June, 1955. These ten eggs varied from 24.7 to 27.7 mm. in length, mean 26.06  $\pm$  0.32 mm. and in width from 14.3 to 15.2, mean 14.69  $\pm$  0.25 mm. In neither length nor width did these oviductual eggs differ significantly from the 44 noted in the previous paper (Edgren, 1949) .

On 17 June two gravid females (no. 13 and no. 14) were obtained through the kindness of the authorities of Camp MacLean on Rockland Lake. Each of these turtles contained one mature egg in each oviduct at autopsy 26 June, 1955. These four eggs were not included in the above comparisons as it was felt that the conditions of captivity (they were maintained in water in aquaria both at the camp and in my possession) may have caused abnormal retention of eggs on the part of the females.

\*Division of Biological Research, G. D. Searle and Co., P.O. Box 5110, Chicago 50, Illinois

Shortly after autopsy of the females all eggs were placed in a round glass laboratory dish lined with paper toweling. The eggs were covered with more paper towels and the entire dish was covered with a towel held in place with a rubber band. At weekly intervals the towels covering the eggs were wet with tap water and excess water squeezed out. Measurements were taken at irregular intervals during the incubation period.

Table 1. Measurements of living *Sternotherus odoratus* eggs during incubation.

Female	Date		Egg	Date of Measurement					
	Autopsy			10/vi	24/vi	1/vii	11/viii	26/viii	2/ix
10	9/vi/55	a	L	26.7	26.7		26.7	26.6	26.7
			W	15.2	15.1		15.0	15.1	15.1
		b	L	27.4	27.5		27.4	27.4	
			W	14.8	14.9		14.8	14.9	
		c	L	27.7	27.7		27.7	27.7	
			W	14.9	14.8		14.8	14.8	
12	9/vi/55	a	L	24.7	24.7		24.7	24.7	24.8
			W	14.6	14.6		14.6	14.6	14.6
		b	L	26.1	26.2		26.1	26.1	26.2
			W	14.6	14.6		14.5	14.6	14.6
		c	L	26.3	26.2				
			W	14.8	14.7				
13	28/vi/55	a	L			28.8	28.8	28.8	28.8
			W			14.3	14.3	14.3	14.3
		b	L			30.1	30.0	30.1	30.0
			W			14.4	14.3	14.4	14.3

No eggs from females no. 9 or no. 14 hatched, those from turtle no. 10 hatched 2 September, two of the four from no. 12 hatched 4 September (the other two were opened 11 August and one was found alive ; the other, which had been cracked during the initial measuring, was dead) , and one of the two from no. 13 was opened 21 September (alive) ; the other hatched 29 September. Measurements on these eight eggs which lived through till hatching are presented in Table 1. These data showed that musk turtle eggs do not increase in either length or width during incubation as all differences were essentially random, resulting no doubt, from varying amounts of pressure applied to the calipers during measurement. Further, late oviductual eggs of this species did not differ significantly in size from eggs incubated through to hatching. In view of the extremely brittle nature of the shell of musk turtle eggs it is not at all surprising that there were no size changes during incubation.

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H. K. Gloyd, Director